

**A Parallel Chronology of
Prof. Kaoru Ishikawa's Life and TQC in Japan**

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Year	Prof. Ishikawa's Life	Major Events in the Development of QC
1915 July 13	<ul style="list-style-type: none"> • Born in Nishigahara, Takinogawa Ward, Tokyo City as the first son of Ichiro and Tomiko Ishikawa 	
1923 (Age 8)	<ul style="list-style-type: none"> • Entered Elementary School attached to Tokyo Higher Normal School 	<ul style="list-style-type: none"> • Shewhart devised the control chart. (1924)
1928 (Age 13)	<ul style="list-style-type: none"> • Entered Junior High School attached to Tokyo Higher Normal School 	<ul style="list-style-type: none"> • Kinnosuke Ogura suggested the possibility of the application of statistical methods to the production process. (1924)
1933 (Age 18)	<ul style="list-style-type: none"> • Entered Tokyo High School 	<ul style="list-style-type: none"> • Fisher's <i>Statistical Method for Research Workers</i> was published. (1925)
1936 (Age 21)	<ul style="list-style-type: none"> • Entered the Department of Applied Chemistry, the Faculty of Engineering, Tokyo Imperial University 	<ul style="list-style-type: none"> • Yasushi Ishida (Tokyo Electric Company) introduced statistical methods to the production of lightbulbs. (1929)
1937 (Age 22)	<ul style="list-style-type: none"> • During the summer vacation of his second year at the university he spent four weeks in Hokkaido and Karafuto (present-day Sakhalin) with his university friend Takashi Mukaibo (who later became the President of the University of Tokyo), visiting pulp mill, coal mine, beet-sugar mill, etc. • He also visited Manchuria (present-day Liaoning Province, China). • He became a member of the Chemical Society of Japan. 	<ul style="list-style-type: none"> • Dodge and Roming proposed a method of sampling inspection with screening. (1929) • Shewhart's <i>Economic Control of Quality of Manufactured Products</i> was published. (1931) • Yasushi Ishida devised the control chart, which he called "<i>makimono</i>," and used to control the production process of lightbulbs. (1931) • Kanzo Kiribuchi introduced quality control as "<i>Hinshitsu Tosei</i>" in his book <i>The Science of Industrial Control</i>. (1931) • Pearson's "The Application of Statistical Methods to Industrial Standardization and Quality Control," which later became BS 600, was published. (1935)
1939 March 31 April 1 May 30 (Age 24)	<ul style="list-style-type: none"> • He graduated from the Department of Applied Chemistry, the Faculty of Engineering, Tokyo Imperial University • He started working at the Oji Laboratory of Nissan Chemical Industries, Ltd. • He joined the Navy and served as an ordnance sublieutenant. (He joined 2nd short-term engineering officers of the Japanese Navy on active duty. As part of his training, he served 	<ul style="list-style-type: none"> • Shewhart's <i>Statistical Method from the Viewpoint of Quality Control</i> was published.

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	<p>aboard the heavy cruiser "Maya.")</p> <ul style="list-style-type: none"> • He became a member of the Electrochemical Society of Japan. 	
<p>1940</p> <p>(Age 25)</p>	<ul style="list-style-type: none"> • He became a member of the Industrial Explosives Society, Japan. 	<ul style="list-style-type: none"> • All Japan Society of Scientists and Engineers (the predecessor of the Union of Japanese Scientists and Engineers) was established.
<p>1941</p> <p>March 29</p> <p>May 30</p> <p>June 1</p> <p>(Age 26)</p>	<ul style="list-style-type: none"> • He was promoted to a naval ordnance lieutenant and awarded <i>shoshichii</i> (the senior seventh rank). • He was ordered to become a reserve officer. • He joined Nissan Liquid Fuel Company and worked in the Construction Technology Group. He engaged in the construction of Lurgi carbonizers. • He became a member of the Fuel Society of Japan. 	<ul style="list-style-type: none"> • Toshio Kitagawa, Tatsuo Kawada, Motosaburo Masuyama, etc. established the Research Association of Statistical Sciences and published the journal "Bulletin of the Statistical Mathematics." • "Z1-1 Guide for Quality Control," "Z1-2 Control Chart Method of Analyzing Data" were established. (ASA)
<p>1942</p> <p>Feb. 11</p> <p>May</p> <p>Nov. 1</p> <p>(Age 27)</p>	<ul style="list-style-type: none"> • He married Keiko Ujiie and the newly-wed couple lived in Nishigahara, Takinogawa Ward, Tokyo City. • He was transferred to Nissan Liquid Fuel's Wakamatsu Plant and the couple moved to a company-owned house in Wakamatsu City, Fukuoka Prefecture. • He was promoted to Technical Lieutenant of the Navy. • He became a member of the Society for Chemical Engineering, Japan. 	<ul style="list-style-type: none"> • "Z1-3 Control Chart Method of Controlling Quality During Production" was established. (ASA) • All Japan Federation of Science and Technology established Research Groups 1001 and 1002 to research quality control (QC). • The Japanese translation of Pearson's <i>The Application of Statistical Methods to Industrial Standardization and Quality Control</i> (translated by Yasushi Ishida and Toshio Kitagawa) was published. • In US, the Demand Production Bureau held QC seminar. (34 seminars were held around the country from 1924, and approx. 2,000 people attended.)
<p>1943</p> <p>(Age 28)</p>		<ul style="list-style-type: none"> • Statistical mathematicians led by Jiro Yamauchi instructed QC methods at military factories. • Dodge proposed the method of sampling inspection plan for continual production (CSP-1). • Toshio Kitagawa proposed the methods

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		of single and double sampling inspection plan.
1944 March 17 (Age 29)	<ul style="list-style-type: none"> • His first son, Tadashi, was born. 	<ul style="list-style-type: none"> • Kosei-kai, Japan Society of Technology, and All Japan Society of Scientists and Engineers were dissolved and the Great Japan Society of Technology (the predecessor of the Union of Japanese Scientists and Engineers) was founded. • The Ministry of Education established the Institute of Statistical Mathematics.
1945 Autumn Oct. 25 (Age 30)	<ul style="list-style-type: none"> • He was transferred to Nissan Liquid Fuel's Head Office and moved to Kamiishiwara Chofu Town, Kitatama County, Tokyo. • His first daughter, Hiroko, was born. 	<ul style="list-style-type: none"> • A. Wald proposed the method of sequential sampling inspection. • The Japan Standards Association was founded. (Dec.)
1946 (Age 31)		<ul style="list-style-type: none"> • The American Society for Quality Control (ASQC) was founded and the publication of the journal <i>Industrial Quality Control</i> (renamed <i>Quality Progress</i> in Feb. 68) started. • The Great Japan Society of Technology was dissolved and replaced by the Union of Japanese Scientists and Engineers. (May) (The first president: Ichiro Ishikawa, -70) • The publication of the <i>Standards and Standardization</i> journal started. (Aug., JSA) • The Japan Business Federation was founded. (Sep. The first president: Ichiro Ishikawa) • Magil and others instructed QC at NEC's Tamagawa Plant. (GHQ, CCS) • The Rice Statistics Mission, including Dr. Deming, visited Japan to investigate statistical survey systems.
1947 Jan. 18 (Age 32)	<ul style="list-style-type: none"> • He became an associate professor at the First Faculty of Engineering, Tokyo Imperial University. (Department of Petroleum Engineering, the 3rd 	<ul style="list-style-type: none"> • The International Organization for Standardization (ISO) was founded. (Feb.)

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	Petroleum Refinery Engineering Laboratory) • He started research on coal briquettes.	
1948 Nov. 20 (Age 33)	<ul style="list-style-type: none"> • His second son, Akira, was born. • He and Masumasa Imaizumi (then a graduate student) began studying statistical methods (at the University of Tokyo). • He became a member of the Japanese Association of University Professors. • He became a member of the Japanese Society for Engineering Education. 	<ul style="list-style-type: none"> • A statistics workshop was held to offer a wide introduction to QC. (Aug. the Society for Applied Mechanics) • The Quality Control Research Group was established. [The group was called the "QC Research Group" from around autumn of 1949.] (JUSE) • NEC Tamagawa Plant introduced QC in accordance with Z1-1 to Z1-3 under the guidance of Sarasohn. (GHQ, CCS) • Magil, Sarasohn, Reck and others gave lectures on QC at several communication device manufacturing companies. • The Research Institute for Electrical Communication introduced sampling inspection on purchased products. (Nippon Telegraph and Telephone Public Corporation)
1949 (Age 34)	<ul style="list-style-type: none"> • The name of the course which he taught was changed from the 3rd Petroleum Refinery Engineering Laboratory to the Fuel Engineering Laboratory. (the University of Tokyo) • He became an instructor of the QC Basic Course. (JUSE) • He joined the QC Research Group and started to research QC. (JUSE) 	<ul style="list-style-type: none"> • Consultations on QC activities started at several companies by Eizaburo Nishibori, etc. (May, JMA) • A 2-days QC seminar was held. (June, JSA) • The Industrial Standardization Act came into effect. (JES was unified into JIS and the JIS Marking System was established. July) • The QC Basic Course was held. (The first course was one year long. From the second year, the course lasted for 6 months.) (Sep. JUSE) • The Overseas Technologies Research Committee was established. (One of its research themes was to research QC.) (JUSE) • The GHQ-CCS Course was held.
1950 (Age 35)	<ul style="list-style-type: none"> • He became the Vice-chair of the Editorial Committee of <i>Hinshitsu Kanri</i> (Statistical Quality Control). (-52, JUSE) 	<ul style="list-style-type: none"> • JUSE started publication of <i>Hinshitsu Kanri</i> (Statistical Quality Control). (March)

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	<ul style="list-style-type: none"> • He gave the first lecture in the QC Basic Course and introduced Rice's <i>Control Chart</i>. (July 21, JUSE) • He became a steering committee member of the QC System Research Committee. (JSA) • He became a lecturer of the "Statistical Methods and Design of Experiment" seminar. (-58, Kanto Branch of the Chemical Society of Japan, Dec. 7-9) 	<ul style="list-style-type: none"> • The <i>Standards and Standardization</i> journal was renamed <i>JIS</i> journal. • The JIS Mark Certification System started. (March) • Act on Standardization and Proper Quality Labelling of Agricultural and Forestry Products (JAS marks) came into effect. (May) • Dr. Deming gave several QC lectures including an 8-days QC seminar, and a 1-day seminar for top management during his 70-day stay in Japan. (July-Sep. JUSE) • The QC System Research Committee was established. (The preparation of JIS on sampling inspection, control charts, etc., started. The committee was later renamed the Control System Committee (COSCO).) (JSA) • Consultations on QC activities at Fuji Iron & Steel's Wanishi Ironworks by a group of Nishibori, Mizuno, Ishikawa, Kusaba, and Imaizumi.
<p>1951</p> <p>(Age 36)</p>	<ul style="list-style-type: none"> • After the reorganization of the department, Ishikawa belonged to the Department of Applied Chemistry, Chemical Engineering Course, Fuel Engineering Laboratory. (The University of Tokyo) • He became a member of the Deming Prize Committee. He also served as the Vice-chair of the Deming Application Prize Subcommittee. (-85) • He became the chair of the Sampling Research Group. (JUSE) • He became the chair of the QC Conference. (-71, JUSE) • He served as a member of the Editorial Committee of the JUSE English Report. • He became a member of the American Society for Quality Control. 	<ul style="list-style-type: none"> • The first issue of <i>Reports of Statistical Application Research</i>, JUSE (hereinafter referred to as the "JUSE English Report") was published. (March, JUSE) • The QC Committee was established. (July, the Iron and Steel Institute of Japan) • The Deming Prize [Prize for Individuals and Application Prize] was established. (June, JUSE) • Dr. Deming visited Japan. (July-Oct., JUSE) • The 1st Deming Prize Ceremony was held at the same time as the 1st QC Conference. (Osaka, Sep., JUSE) • [The first winners] Deming Prize for Individuals: Motosaburo Masuyama; Deming Application Prize: Showa Denko, Tanabe Pharmaceuticals, Fuji Iron & Steel, and Yawata Iron & Steel • The Market Research Committee was

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		established and held the Market Research Seminar. (Nov., JUSE) • The Sampling Research Group was founded. (Dec., JUSE)
<p>1952</p> <p>(Age 37)</p>	<ul style="list-style-type: none"> • He became the Chair of the Editorial Committee of <i>Hinshitsu Kanri</i> (Statistical Quality Control). (-78, JUSE) • He became a temporary member of the Japanese Industrial Standards Committee. (the Ministry of International Trade and Industry) • He became a lecturer of the “Statistical Methods and Quality Control” seminar (-54, Kinki Branch, the Chemical Society of Japan, and JUSE) • He was awarded the Deming Prize for Individuals. • He published <i>Sampling in Factories</i>. (July, Maruzen) 	<ul style="list-style-type: none"> • Dr. Deming visited Japan. (Jan., JUSE) • Kenichi Koyanagi reported on QC practiced in Japan at the 6th ASQC Annual Conference. (May) • The 2nd QC Conference was held. (QC Conference was held annually in November in Tokyo.) (JUSE) • ASQC Japan Branch was founded. (Dec.) • U.S. Defense Department established AGREE and started researching reliability. • The Japanese Industrial Standards Committee joined the International Organization for Standardization (ISO). • The Research Association of Statistical Sciences published <i>Statistical Tables: New Edition</i>.
<p>1953</p> <p>(Age 38)</p>	<ul style="list-style-type: none"> • He devised the cause and effect diagram, which was applied to the production process at the Fukiai Plant of Kawasaki Steel. • He became the main lecturer of the QC and Standardization Seminar. (JSA) 	<ul style="list-style-type: none"> • The OR Training Course was held. (June, JUSE) • The QC and Standardization Seminar was held. (JSA) • The Award of the Excellent Factories in Implementation of Industrial Standardization, the Award of the Minister of International Trade and Industry, the Award of Director-General of Agency of Industrial Science and Technology for the Excellent Factory in Implementation of Industrial Standardization and the Award of the Director-General of the Regional Bureau of International Trade and Industry for the Excellent Factory in Implementation of Industrial Standardization were established.
<p>1954</p> <p>(Age 39)</p>	<ul style="list-style-type: none"> • He became a part-time lecturer at Gunma University. (-66) • He published <i>Introduction to Quality</i> 	<ul style="list-style-type: none"> • Dr. Juran visited Japan. During his 45-day stay in Japan, he gave a special QC Seminar for Executives and a QC

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	<p><i>Control</i>. (JUSE)</p> <ul style="list-style-type: none"> • His book <i>Sampling in Factories</i> (Maruzen) was awarded the Nikkei Quality Control Literature Prize. 	<p>Seminar for Managers. He also visited several industrial plants in Japan. (July–Aug., JUSE)</p> <ul style="list-style-type: none"> • The Nikkei Quality Control Literature Prize was established. (Nov.) • ISO/STACO (the Committee on Standardization Principles) was established. • Industrial Standardization Promotion Week was established. • The Kanagawa QC Research Group was established at the Industrial Research Institute of Kanagawa Prefecture.
<p>1955</p> <p>(Age 40)</p>	<ul style="list-style-type: none"> • He became the chair of the Control Chart Research Group and the Sampling Research Group of QC Basic Course. (JUSE) • <i>The Control Chart Method</i> written and edited by Ishikawa was published. (A revised edition was published in Oct., 1962 by JUSE Press.) 	<ul style="list-style-type: none"> • QC Basic Course Lecturers' Association was established. (JUSE) • The Japan Productivity Center (JPC) was founded and began dispatching a delegation to America to research productivity. (March) • The Sensory Test Research Group was established. (April, JUSE) • The QC Seminar for Managers was held. (May, JUSE) • The Design of Experiment Seminar was held. (May, JUSE) • The JUSE Press, LTD. was established in June. (Renamed JUSE Press, Ltd. in Nov. 1966) • Research on QC implementation in Japan was conducted. (JSA) • The Japan Industrial Training Association was founded and started the promotion of TWI and WSP. • The Standardization Seminar was held. (JSA)
<p>1956</p> <p>(Age 41)</p>	<ul style="list-style-type: none"> • He became the chief of ASQC Japan Branch. (–58) • He appeared as a lecturer on Nihon Short-Wave Broadcasting's program "QC Courses." 	<ul style="list-style-type: none"> • The <i>JIS</i> journal was renamed <i>Standardization</i>. (Jan., JSA) • The 6-day QC Introductory Seminar was held. (Apr., JUSE) • The first issue of <i>Operations Research</i> journal was published. (June, JUSE) • Nihon Short-Wave Broadcasting broadcast a program titled the <i>QC</i>

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		<p><i>Course</i>. (July–Dec. 1957, JUSE)</p> <ul style="list-style-type: none"> • The Chugoku Quality Control Research Group was established. (JSA Hiroshima) • The Design of Experiment Seminar was held. (JSA) • The European Organization for Quality Control (EOQC) was founded. • A. V. Feigenbaum published his thesis titled “Total Quality Control” in the <i>Harvard Business Review</i>.
<p>1957</p> <p>(Age 42)</p>	<ul style="list-style-type: none"> • He appeared as a lecturer on NHK's radio programs. (–62, NHK Radio 2) • His article “Points in Preparing In-house Standards” (published in the <i>Hinshitsu Kanri</i> (Statistical Quality Control) [140]) won the Standardization Literature Award. • He started playing golf. • He published <i>Introduction to Sampling Methods</i>. (June, JUSE Press) 	<ul style="list-style-type: none"> • The first Spring QC Conference was held. (Osaka, May, JUSE) • The Operations Research Society of Japan was founded. (June) • The QC Seminar for Executives was held in Karuizawa. (July, JUSE) • The Sensory Test Seminar was held. (Sep., JUSE) • The Kansai QC Research Group was established. (JSA) • The Professional Engineer Act came into effect, which created the qualification of “production management engineer.” • George Box proposed EVOP. • The radio programs <i>New Management and Quality Control</i> (57), <i>Basic Course on Production Management</i> (58), <i>Introduction to Production Management</i> (59), <i>Production Management Made Simple</i> (60), <i>Quality Control Made Simple</i> (61), and <i>Introduction to Quality Control</i> (62) were broadcast on NHK Radio 2.
<p>1958</p> <p>Feb.</p> <p>(Age 43)</p>	<ul style="list-style-type: none"> • He received a Ph.D. in engineering from the University of Tokyo. His doctoral thesis was “Coal Sampling.” • He visited the US as the deputy of the QC Special Delegation. (Head of the delegation: Noboru Yamaguchi) (Jan., JPC) • He became a member of The Japan Petroleum Institute. • <i>Quality Control Guidebook</i> (Vol. 1, Vol. 	<ul style="list-style-type: none"> • The Reliability Research Committee was established. (Oct., JUSE) • The 1st National Meeting of Standardization was held in Tokyo. (Oct., JSA) • The Deming Application Prize for Small Enterprise was established. (Nov.) The first winner was Nakayo, Inc. • The Kyushu QC Research Group was established. (JSA)

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		<p>and promotional posters were distributed.</p> <ul style="list-style-type: none"> • An NHK educational program <i>The Quality of Japanese Products</i> (the Quality Month Broadcast) was broadcast on NHK Radio 2. • The Association of Technical High School Principals started QC lectures.
<p>1961</p> <p>(Age 46)</p>	<ul style="list-style-type: none"> • After the reorganization of the department, Ishikawa belonged to the 4th Fuel Engineering Laboratory (Applied Combustible Science). (the University of Tokyo) • He became a lecturer of the Introductory Course for Design of Experiment. (JUSE) • He became a member of the ISO/TC 102 Japan Committee and served as the chair of the Sampling Subcommittee. (-81, Japan Iron and Steel Federation) • He was awarded with the Fuel Society of Japan Award. 	<ul style="list-style-type: none"> • The QC Seminar for Managers and the QC Seminar for Supervisors started. (Central Japan Industries Association) • Introductory Course for Design of Experiment was held. (Apr., JUSE) • The Asian Productivity Organization (APO) was founded. (May) • Japan became the secretariat of ISO/TC102 (iron ore). • The Japan Consumers' Association was founded. (Sep.) • The "Supervisor Special Issue" of <i>Hinshitsu Kanri</i> (Statistical Quality Control) was issued. (Nov., JUSE)
<p>1962</p> <p>(Age 47)</p>	<ul style="list-style-type: none"> • He became the chair of the editorial board of <i>Genba To QC-magazine</i>. (JUSE) • He became the chair of COSCO's Standardization Research Group. (-71, JSA) • He became a board member of the Chemical Society of Japan. (-64) • He became the Executive director of the QC Circle Headquarters. • He published <i>Quality Control Handbook</i> (joint authorship). (A revised edition was published in June, 1977 and the new edition was published in April, 1988. JSA) • His report <i>Japanese Industrial Standards</i> won the Standardization Literature Award. (JSA) 	<ul style="list-style-type: none"> • The first issue of <i>Genba To QC-magazine</i> was published by JUSE. The magazine proposed forming QC circles. (Apr.) • The QC Circle Headquarters was established at JUSE. (May, JUSE) • The Hokkaido QC Research Group was established. (JSA) • The QC Seminar for Supervisors was held. (JSA) • Japan became an IEC Council Member. (-68) • Martin Company started ZD (Zero Defects) activity. (Aug.) • The QC Seminar for Senior Management was held. (Sep., JUSE) • The QC Conference for Foreman, and the QC Conference for Consumers were held. (Nov., JUSE)
<p>1963</p> <p>(Age 48)</p>	<ul style="list-style-type: none"> • He served as the chair at the ISO/TC 102/SC 1 1st International Meeting. (-81, Japan Iron and Steel Federation) 	<ul style="list-style-type: none"> • The ISO/TC 102 (iron ore) 1st International Meeting was held in Tokyo. Japan was the secretariat for SC1 (iron

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	<ul style="list-style-type: none"> • He became a member of the Japanese Industrial Standards Committee. (Main task: Basic Subcommittee) (MITI) 	<ul style="list-style-type: none"> ore sampling). • The 1st QC Circle Conference was held. (May, Sendai) • The 1st Quality Control Study Team to Overseas was dispatched to the US. (The head of the delegation: Kenichi Koyanagi) (May, JUSE) • The QC Research Group (QCRG) was founded. (JUSE) • <i>Abridged Translations of Reliability Literature</i> was published. (Oct., JUSE) • The QC Conference for Top Management was held. (Nov., JUSE) • MIL-STD-105D was established. (The standard, which had been revised sequentially as MIL-STD-105A, B and C, was substantially revised.) • <i>Q-S English Report</i> was published. (JSA) • Research on QC implementation in America, Europe and Asia was conducted. (APO)
<p>1964</p> <p>(Age 49)</p>	<ul style="list-style-type: none"> • He became a part-time lecturer at Seikei University. (-70) • He gave a special lecture and acted as a discussion leader at the Quality Control Symposium held in Tokyo, welcoming representatives from various countries in Asia. (APO) • He published <i>How to Establish Product Standards of Japanese Industrial Standards</i>. (JSA) • He became an advisor to the Japan Productivity Center. 	<ul style="list-style-type: none"> • Kenichi Koyanagi was awarded the ASQC Edwards Medal. (May) • A presentation on "Control Points" was given at the Matsuyama QC Conference. (May, JUSE) • The Quality Control Symposium was held in Tokyo, welcoming representatives from various countries in Asia. (Aug., APO) • The QC Circle Kanto Regional Chapter, Tokai Regional Chapter, Kinki Regional Chapter and Hokuriku Regional Chapter were founded. (Sep., QC Circle Headquarters) • <i>Standardization</i> journal was renamed <i>Standardization and Quality Control</i>. (Apr., JSA) • The 1st Nagano Q-S Conference was held. (JSA) • The US Department of Defense recommends defense companies to adopt ZD activity.

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<p>1965</p> <p>(Age 50)</p>	<ul style="list-style-type: none"> • He joined the 2nd QC Overseas Research Team as the head of the delegation (JUSE). He introduced the activities of QC circles at the ASQC Annual Conference. • He became a member of the Quality Control Symposium Organizing Committee. (-78, JUSE) • JIS M 8100 “Particulate materials – General rules for methods of sampling” was established. (He served as the chair of the Draft Committee.) 	<ul style="list-style-type: none"> • <i>Genba To QC-magazine</i> established the FQC Award. (Jan., JUSE) • The Reliability Introductory Seminar was held. (Feb., JUSE) • The QC Circle Chugoku Regional Chapter and Shikoku Regional Chapter were founded. (June, QC Circle Headquarters) • The Quality Control Symposium (QCS) was established and decided to hold meetings twice a year. (July, JUSE) • The Japan-America Joint Symposium on Bulk Material Sampling was held. (Nov., Tokyo) • NEC implemented ZD activity on a company-wide level. • The New Product Development Class was held. (JSA) • The Tohoku QC Research Group was established. (JSA) • The 1st QCS: How to introduce, promote and establish QC. • The 2nd QCS: The role of QC department.
<p>1966</p> <p>(Age 51)</p>	<ul style="list-style-type: none"> • He attended the 10th EOQC Conference held in Stockholm. During the QC circle special discussion, he was invited onto the stage. • He became one of six man board of the International Academy for Quality preparation committee. (-69) • He became an inspector at the Science and Technology Agency. 	<ul style="list-style-type: none"> • The Deming Application Prize for Division was established. • Dr. Juran was invited to the 14th QC Circle Convention held by the Kanto Regional Chapter. (Apr., JUSE) • The Reliability Seminar for Managers was held. (July, JUSE) • The QC Computer Course was held. (Sep., JUSE) • Takeshi Suzuki visited the United Arab Republic to teach QC. (UNIDO) • The “QC Circle Song” was made. (Nov., QC Circle Headquarters) • Genichi Taguchi published <i>Statistical Analysis</i> and introduced the S/N ratio. • The 3rd QCS: The problems in inspections (Part 1). • The 4th QCS: The relations between the vendor and the vendee.

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<p>1967</p> <p>(Age 52)</p>	<ul style="list-style-type: none"> • He became the chair of the organization committee of the QC Seminar for Foremen. (-71, JUSE) • He became a member of ICQC '69-TOKYO Organizing Committee. (-69, JUSE) • He became a member of the Q-S Organization Committee. (JSA) • He proposed a revised edition of "Ten QC Principles for Vendor-Vendee Relations" was published. • He published <i>Introduction to Analysis of Variance</i> (joint authorship). (Nov., JUSE Press) 	<ul style="list-style-type: none"> • The QC Seminar for Foremen was held. (Jan., JUSE) • The ICQC '69-TOKYO Organizing Committee was established. (Sep., JUSE) • The World Health Organization (WHO) recommended pharmaceutical companies to adopt QC. • The National Meeting on Quality Control and Standardization (Q-S Conference) was established. (JSA) • The 5th QCS: Process analysis. • The 6th QCS: QC in the era of automation and computerization (1).
<p>1968</p> <p>(Age 53)</p>	<ul style="list-style-type: none"> • Student protests began at the University of Tokyo, and Ishikawa's work was affected. • He became the principal lecturer of Industrial Standardization and Quality Control Seminar for developing countries. (-74, OTCA/JSA, 74-, JICA/JSA) • He became the chair of the organization committee of the QC Seminar for Marketing • He published <i>Guide to Quality Control</i>. (JUSE Press) The English edition of <i>Guide to Quality Control</i> (1st ed. 1974, rev. ed. 1976. 2nd rev. ed. 1982), French edition (1984), Italian edition (1985), Spanish edition (1985), Indonesian edition (1986), Hebrew edition (1988), and Dutch edition (1989) were published. A publishing deal for the Portuguese edition was concluded, but it hasn't been published yet. (APO) • His report <i>Ideal Product Standard and How to Create It</i> won the Standardization Literature Award. (JSA) • He published <i>Control Chart</i>. (JSA) 	<ul style="list-style-type: none"> • Training of industrial standardization and QC for participants from developing countries started. (The 1st 4-month course was held in Tokyo) (-74, OTCA/JSA, 74-, JICA/JSA) • The 1st QC Circle Team to Overseas (1-FQCT) (Head of the delegation: Masumasa Imaizumi) (Apr., JUSE) • The JUSE Course for Marketing was held. [75- QC Seminar for Marketing] (Aug., JUSE) • ZE National Conference was held (JMA) • Research on the utilization of JIS and the economic effects of industrial standardization was conducted. (Agency of Industrial Science and Technology/JSA) • Japan became a council member of ISO. (-71) • The Japan Society for Production Engineering was founded. (Oct.) • The QC Circle Kyushu Regional Chapter was founded. (Nov., QC Circle Headquarters) • The 1st VE National Conference was held. (Society of Japanese Value Engineering) • ASQC's journal was renamed <i>Quality Progress</i>.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
		<ul style="list-style-type: none"> • The Taiwanese QC Team visited Japan and attended the QC Conference for Foreman and the QC Conference for Manager and Staff. • The 7th QCS: Quality Assurance and reliability. • The 8th QCS: Sales activities and QC.
<p>1969 May 23</p> <p>(Age 54)</p>	<ul style="list-style-type: none"> • His first daughter, Hiroko, married Yasushi Kurokawa. • He became the chair of the Administrative Organization Subcommittee of the University Reform Preparatory Research Committee. (–70, the University of Tokyo) • He became a member of the Japanese Society for Quality Control Preparation Committee. (–70) • He became the Vice-chair of ICQC '69-TOKYO Technical Session. • He became a member of the Japanese Industrial Standards Committee. (ISO Subcommittee, MITI) • He became an ASQC fellow. (–86) • He was commended by the Minister of International Trade and Industry for his contribution to the promotion of industrial standardization. • His <i>Statistical Methods for Chemists and Chemical Engineers</i> and <i>Design of Experiment for Chemists and Chemical Engineers</i> Volume I and Volume II (Tokyo Kagaku Dojin) won the Nikkei Quality Control Literature Prize. 	<ul style="list-style-type: none"> • ICQC '69-TOKYO (the first international QC conference held on a world-wide level) was held in Tokyo. (Oct., JUSE) • IAQ was founded. (Oct., Tokyo) • The Kansai ZD Group's conference was held. (JMA) • The QC Application Seminar for Office and Sales Department was held. (JSA) • The Self Motivated Micro-Management (<i>Jishu-Kanri</i>; JK) Activity Committee held their JK activity report meeting. (Japan Iron and Steel Federation) • The 1st Tochigi Q-S Conference, and the 1st Tohoku Q-S Conference were held. (JSA) • The Yamanashi Prefecture QC Research Group was established. (Kofu Chamber of Commerce and Industry) • A questionnaire survey on in-house standardization and quality control was conducted. (Agency of Industrial Science and Technology/JSA) • To celebrate the 20th anniversary of the Industrial Standardization Act, <i>The 20-year History of Japan's Industrial Standardization</i> was published. • The 9th QCS: The distinctive features and problems of Japanese QC. • The 10th QCS: Reflection and future development of Japanese QC.
<p>1970 Jan. 20</p> <p>(Age 55)</p>	<ul style="list-style-type: none"> • His father, Ichiro Ishikawa, passed away at 84. • He became the Vice-chair of the Establishment Committee for the Japanese Society for Quality Control. 	<ul style="list-style-type: none"> • The Ishikawa Award was established. The Ishikawa Award Committee was established. (June, JUSE) • The Japan Quality Control Medal was established. (Aug., JUSE)

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
	<p>(-71)</p> <ul style="list-style-type: none"> • He introduced QC circles to Taiwan. On the occasion of Ishikawa's visit to Taiwan, the 1st National QC Circle Conference was held. (PETT, Taiwan) • He became the chair of the ISO/TC 69 Japan Committee. • He became a lecturer on the "Production Control Course for Machinery Manufacturers" for participants from developing countries. • <i>QC Circle Koryo, General Principles of the QC Circle</i> written and edited by Ishikawa was published. (A revised edition was published in Oct. 1990. JUSE) 	<ul style="list-style-type: none"> • The first winner was Toyota Motor Industries (Nov.) • The Sensory Test Overseas Research Team was dispatched. (May, JUSE) • The Standardization Mission Team (headed by Hidehiko Azuma) was dispatched to the USSR. (JSA) • The 2nd Japan-America Joint Symposium on Bulk Material Sampling was held. (Oct., Hawaii) • October 14 was declared as World Standards Day. (ISO) • The Japanese Society for Quality Control foundation meeting was held. (Nov.) • The 11th QCS: Planning and quality. • The 12th QCS: Product safety, pollution and QC.
<p>1971</p> <p>(Age 56)</p>	<ul style="list-style-type: none"> • After the reorganization of the faculty, Ishikawa belonged to the Department of Reaction Chemistry, the 4th Laboratory (Reaction Management Engineering). (the University of Tokyo) • He became the Vice-president of the Japanese Society for Quality Control. (-74) • He became the director of the Union of Japanese Scientists and Engineers. • He became the chair of the Sampling Research Group of Environmental Pollution. (-81, JUSE) • He became the vice-chair of the Reliability and Maintainability Symposium Organizing Committee. (JUSE) • He became the chair of the Organizing Committee of the JUSE Course for Purchasing. (JUSE) • He became the President of the QC Circle Cruising Seminar. (JUSE) • He became the chair of the International Group of Japanese Standards Association. (JSA) • He became the chair of the ISO/TC 69 Japan Committee. 	<ul style="list-style-type: none"> • The QC Correspondence Basic Course for Foremen was held. (Jan., JUSE) • The QC Circle Hokkaido Regional Chapter was founded. (March, QC Circle Headquarters) • Reliability Symposium [71-, Reliability and Maintainability Symposium] was held. (Apr., JUSE) • The Japanese Society for Quality Control was founded. (Apr., First President: Yasusaburo Hara) • The Sampling Research Group of Environmental Pollution was established. (May, JUSE) • The QC Circle Cruising Seminar was held. (June, JUSE) • The International Committee of the Control System Research Group was established. (JSA) • The first issue of the journal of the Japanese Society for Quality Control <i>Hinshitsu</i> (Quality) was published. (Sep.) • QC Diagnosis by Deming Prize Committee started. • Japan was re-elected as a council member of ISO. • The JUSE Training Course for

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
	<ul style="list-style-type: none"> • <i>How to Operate QC Circle Activities</i> written and edited by Ishikawa was published. (The 1st revised edition was published in July 1976 and the 3rd revised edition was published in April 1991. JUSE) • He became a member of the Japanese Society for Quality Control. 	<ul style="list-style-type: none"> • Purchasing and Material Department was held. [75–, JUSE Training Course for Procurement and Material Department] (Oct., JUSE) • The Multivariate Analysis Research Group was established. (Nov., JUSE) • The All Japan QC Circle Conference was held. (Nov., JUSE) The President of QC Circle Grand Prize was established. • The Chubu Quality Control Association was founded. • The 13th QCS: Future QC staff — challenges in 1970s. • The 14th QCS: Quality evaluation.
<p>1972 Oct. 27</p> <p>(Age 57)</p>	<ul style="list-style-type: none"> • His first son, Tadashi, married Noriko Inoue. • He joined the 7th QC Overseas Research Team as the head of the delegation and introduced PL issues to Japan. (JUSE) • He became a member of the International Cooperation Committee. (–78, ASQC) • Ishikawa, as the chair of the Standards Rationalization Committee, submitted the Improvement Proposal “<i>Japanese Industrial Standards.</i>” (JSA) • He became the chair of the ISO/TC 102/SC 1 7th International Meeting. • He became the chair of the organizing committee for the International Symposium on the Air Pollution Prevention Technology. (JUSE) • He became a member of IAQ. • He was awarded with the Grant Medal 1971. (ASQC) 	<ul style="list-style-type: none"> • Reliability Study Team to overseas (RET) was dispatched. (July, JUSE) • The QC Research Delegation was dispatched to Europe. (Chubu Quality Control Association) • There was a presentation on “Quality Table” at Fukuoka QC Conference. • <i>Hinshitsu Kanri</i> (Statistical Quality Control) established the SQC Prize. (June, JUSE) • The Council for the Trainers of Business Management Technology held a national conference. (July, JUSE) • IAQ meeting was held in Washington at the same time as the ASQC Annual Conference. IAQ was founded. • The QC Circle Seminar for Facilitators was held. (May, JUSE) • The QC Circle Summer Seminar was held in Koyasan. (July, JUSE) • The PL Research Committee was established. (Oct., JUSE) • The QC Council of Executives was established. (Dec., JUSE) • The Certification System for Excellent QC Factories for Manufactured Housing was established. (MITI) • USA enacted the Consumer Product Safety Act. Product Liability becomes an object of public concern.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
		<ul style="list-style-type: none"> • The 15th QCS: QC as a tool to overcome the economic depression. • The 16th QCS: Our company's company-wide quality control.
<p>1973</p> <p>(Age 58)</p>	<ul style="list-style-type: none"> • He became the chair of the organizing committee of QC Circle Seminar for Top Management. (JUSE) • He became a member of the Japan-Soviet Round-table Conference on Standardization. (JSA) • He visited China as a delegation member to research industrial standardization and quality control. • He visited Europe as the general leader of the 6th QC Circle Overseas Research Delegation Team. (Head of the delegation; Koichi Ohba) (JUSE) • He published <i>Product Liability</i> (joint authorship). (Nov., JUSE Press) 	<ul style="list-style-type: none"> • The Quality Control Award for Factory by Deming Prize Committee was established. (Nov.) The first winner was Mitsubishi Heavy Industries' Kobe Shipyard. • The QC Circle Seminar for Top Management was held. (Jan., JUSE) • <i>Genba To QC-magazine</i> was renamed <i>FQC</i>. (Jan., JUSE) • The Distribution Department QC Research Group (textile field) was established. (Apr., JUSE) • The 1st Product Liability Study Team (PLT) to Overseas was dispatched. (Aug., JUSE) • The 1st Pacific Area Standards Congress (PASC) was held in Honolulu. • The PLP Seminar was held, inviting American experts as lecturers. (Oct., JUSE) • QC in the production of medical products (JGMP) (The Federation of Pharmaceutical Manufacturers' Association of Japan) • USSR Standardization Delegation visited Japan. • China Standardization and Quality Control Delegation visited Japan. (Oct.) • Lockheed's QC Circle Research Delegation visited Japan. (Nov.) Lockheed formed the first QC circles in America. • Sanuier-Dubal, a French electric motor manufacturer, formed the first QC circles in Europe. • The Product Liability Research Group was established. (Nov., JUSE) • The 17th QCS: Quality assurance and failure analysis. • The 18th QCS: Process capability.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
<p>1974</p> <p>(Age 59)</p>	<ul style="list-style-type: none"> • He became the President of the Japanese Society for Quality Control. (-75) • He became the head of the 1st Internationally-operating Company QC Research Delegation (Southeast Asia). (JUSE) • He became a principal lecturer of the "In-Plant Group Training Program in the Field of Quality Improvement for Industrial Products." (UNIDO/AOTS) • JIS Z 8402 "General rules for permissible tolerance of chemical analyses and physical tests" was established. (Ishikawa was the chair of the Draft Committee.) • He became an honorary member of the Japan Environmental Measurements & Chemical Analysis Association. • <i>Quality Assurance Guidebook</i> edited by Ishikawa was published. (Oct., JUSE Press) 	<ul style="list-style-type: none"> • The QC Circle Tohoku Regional Chapter was founded. (Apr., QC Circle Headquarters) • The Introductory QC Course for Marketing was held. (March, JUSE) • The Housing Industry QC Research Group was established. (MITI) • The Service Industry QC Symposium was held, inviting Dr. Juran. (Oct., JUSE) • ISO/TC 69 newly established SC 1. • The International Standardization Activities Cooperation Center was founded. (JSA) • A Long-term Plan for Industrial Standardization was made. (Agency of Industrial Science and Technology) • "In-Plant Group Training Program in the Field of Quality Improvement for Industrial Products" was held. (-76, UNIC/AOTS, 77-, The course was renamed "Industrial Product Quality Improvement Course.") • The 19th QCS: The Role of QC in era of saving materials and energy. • The 20th QCS: The planning and evaluation of new products.
<p>1975</p> <p>Feb. 23</p> <p>(Age 60)</p>	<ul style="list-style-type: none"> • His mother, Tomiko, passed away at 79. • He became the general leader of the 8th QC Overseas Research Delegation Team dispatched to Europe. (JUSE) • He became the vice-president of IAQ. (-78) • He became a council member of the Japanese Society for Quality Control. (-77) • He became a member of the International Friendship Club. • <i>Quality Assurance Guidebook</i> (JUSE Press) written and edited by Ishikawa was awarded the Nikkei Quality Control Literature Prize. 	<ul style="list-style-type: none"> • The Reliability Data Research Group was established. (Apr., JUSE) • The QC Basic Course for Mid-level Operators started. (March, JUSE) • The PLP Seminar was held. (March, JUSE) • A QC circle session was held at the 30th ASQC Annual Conference. • IAQ meeting was held in Venice in September, at the same time as the EOQC Conference. • The 25th anniversary of the Deming Prize. Dr. Deming was invited to Japan. • The South Korea's Industrial Promotion Bureau began promoting QC. • The 1st National QC Circle Conference

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
		<p>was held in South Korea. The 1st QC and Standardization Conference was also held.</p> <ul style="list-style-type: none"> • The Delegation Team from the South Korea's Industrial Promotion Bureau and the Korean Standards Association Research visited Japan. • A delegation team was dispatched to the USSR. (Japan-Soviet Round-table Conference on Standardization) • The 21st QCS: Measures to address product liability.
<p>1976</p> <p>March 31</p> <p>April 1</p> <p>May 18</p> <p>(Age 61)</p>	<ul style="list-style-type: none"> • Ishikawa retired from the University of Tokyo. • He became a professor of the Faculty of Engineering, Science University of Tokyo. • He became a professor emeritus of the University of Tokyo. • He was awarded with the Asada Medal from the Iron and Steel Institute of Japan. • He became the head of the 2nd Internationally-Operating Company QC Research Team dispatched to Central and South America. (JUSE) • He became a member of PASC. • He became an honorary member of the Philippine Society for Quality. • He became the director of JUSE Press. • He was awarded with the Fuel Society of Japan Award. 	<ul style="list-style-type: none"> • The Iranian QC Research Team visited Japan. (APO) • The 1st East Asia QC Circle International Exchange Meeting was held. (Apr., Seoul) • The TQC Promotion Seminar for Practitioners was held. [79-, TQC Seminar for Facilitators] (June, JUSE) • "Industrial Standardization Basic Problems Round-table Conference" was held. (Agency of Industrial Science and Technology) • "The QC Seminar for Food Manufacturers" for participants from developing countries was held. (APO The 2nd seminar was held in '78) • The 22nd QCS: Data utilization. • The 23rd QCS: Quality and cost.
<p>1977</p> <p>Sep.</p> <p>(Age 62)</p>	<ul style="list-style-type: none"> • He became the chair of the ICQC '78-TOKYO Program Committee. (-78, JUSE) • He became the chair of the ISO Subcommittee of the Japanese Industrial Standards Committee. (MITI) • He became the chair of the Standardization Special Committee of the Japan Farm Machinery Manufacturer's Association Corporation. (Japan Farm Machinery Manufacturer's Association Corporation) 	<ul style="list-style-type: none"> • The Japanese Society for Quality Control became an incorporated association. (Apr.) • Yoshinobu Nayatani, and others proposed the "New Seven management tools for QC." (Jan.) A research committee was established. (May, JUSE) • The QC Circle Seminar for Leaders was held. (July, JUSE) • Governmental Building Construction Q-S Round-table conference was held. (JSA) • The Mexican Quality Control Training

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
	<p>commissioned by the Ministry of the Environment.)</p> <ul style="list-style-type: none"> • His book <i>Control Points of Quality</i> (joint authorship) (Zeimukeiri Kyokai) was awarded Nikkei Quality Control Literature Prize. 	<p>JUSE)</p> <ul style="list-style-type: none"> • The 28th QCS: New product planning and market research. • The 29th QCS: Future Quality Control—challenges in the 1980s.
<p>1980</p> <p>(Age 65)</p>	<ul style="list-style-type: none"> • He became a council member of the Japan Standards Association. (–84) • He became a council member of the Japanese Society for Quality Control. (–82) • He became the chair of the Nuclear Power Plant Quality Assurance Review Committee. (MITI) • He became the chair of the Management Research Group of Japan-China Economic Association. • He became the chair of the Farm Machinery Standardization Research Committee. (–83, Japan Farm Machinery Manufacturer's Association Corporation) • He became a member of the Japan-China Science and Technology Exchange Association. • He became the director of the Kanto Society for Engineering Education. • He became the director of the Association of Private Universities of Japan. • He became the principle instructor at of the “Quality Control Training Course” for Chinese QC engineers. (–86, Chinese Enterprise Management Association/AOTS) • The English translation of <i>QC Circle Koryo, General Principle of the QC Circle</i> was published. [Chinese and French editions (’81), Indonesian edition (’83), Portuguese edition (’85), Spanish edition (’86), Marathi edition (’87, India)] (JUSE) • He became an honorary member of the British QC Circle Association. 	<ul style="list-style-type: none"> • The Software Production Control Research Committee was established. (Feb., JUSE) • The American TV Network NBC broadcast a special program <i>If Japan Can..., Why Can't We?</i> NHK later broadcast this program in Japan. The number of foreign TQC research teams visiting Japan dramatically increased. • The JIS Marking System became open to overseas factories. • The Notified Inspection System for domestic JIS certified factories was introduced. • A long-term industrial standardization promotion plan was made. <ul style="list-style-type: none"> • The Software Production Control Seminar was held. [82–, the Software Quality Control Seminar] (May, JUSE) • The Product Safety Symposium was held. (June, JUSE) • The Quality Control Team for Southeast Asia (SEAQCT) was dispatched. (Oct., the head of the delegation: Ikuro Kusaba, JUSE) • A ceremony to celebrate the 30th anniversary of the Deming Prize was held, inviting Dr. Deming. (JUSE) • The number of countries where QC circle activities are conducted exceeded 35. • The Certification and Inspection Course for participants from developing countries was held. (JICA/JSA) • The 30th QCS: QC in service. • The 31st QCS: QC in the assembly industry.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
<p>1981</p> <p>(Age 66)</p>	<ul style="list-style-type: none"> • He became a council member of the Fuel Society of Japan. • He became a council member of the University Graduates' Society. • He became a member of the ISO Executive Board. • He became a member of the Japan-China Standardization Exchanges Council. • He became the chair of the ICQCC '81-TOKYO Program Committee. (JUSE) • He became the president of IAQ (-83). • He became the chair of the International Affairs Group (for the discussion on whether the Deming Application Prize should be awarded to foreign companies.) • He published <i>What is Total Quality Control? The Japanese Way</i>. (Extended edition was published in Jan., 1984. JUSE Press) [Chinese edition (Taiwan) ('82), French edition ('84), Chinese edition ('84, '86), English edition ('85), Portuguese edition ('86), Slovenian edition ('87), Dutch edition ('87), Italian edition ('92)] • He became an honorary advisor to the China Quality Control Association. 	<ul style="list-style-type: none"> • The ISO/TC 176 Japan Committee (quality assurance) was established. • The 1000th Memorial QC Circle Conference was held. (Apr., QC Circle Headquarters) • Dr. Juran was awarded the Second Class Order of the Sacred Treasure. • The ICQ Conference was held in San Francisco in May at the same time as the ASQC Conference. • JIS certified factories were required to elect a responsible person for QC promotion. • Yokogawa Electric Singapore became the first foreign company, to whom the use of JIS mark was permitted. • The Software Production QC Symposium was held. (July, JUSE) • ICQCC '81-TOKYO was held. (Sep., JUSE) • The Symposium "Policy Management in TQC" was held. (Sep., JSQC) • The Award for Young Researcher's Encouragement was established. (JSQC) • The 32nd QCS: Data analysis in QC. • The 33rd QCS: Review and outlook of the company-wide quality control.
<p>1982</p> <p>(Age 67)</p>	<ul style="list-style-type: none"> • The Ishikawa Laboratory was established at Musashi Institute of Technology. (-86) • He became the chairperson of the board of directors of the Japan-China Science, Technology and Culture Center. (-88) • He became the head of the QC Circle Delegation Team and visited China. (JUSE/Japan-China Economic Association) • He gave a special lecture at ICQCC '82-Seoul. (Nov., Korean Industrial Standardization Association) • He became a member of the Reliability Engineering Association of Japan 	<ul style="list-style-type: none"> • The QC Circle Delegation Team visited China. (Sep., JUSE/Japan-China Economic Association) • The TQC Special Committee of Associated General Constructors was established. • The symposium "Policy Management in TQC II" was held. (Sep., JSQC) • Dr. Deming was invited to Japan. (Nov., JUSE) • Events to celebrate the 25th anniversary of the establishment of the ORSJ. • ICQCC '82-Seoul was held in South Korea.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
	<p>internationalization of the Deming Application Prize. The rules of the Deming Application Prize were revised in accordance with the report.</p>	<p>prize. (Nov.)</p> <ul style="list-style-type: none"> • The Japan Federation of Managerial Engineering Societies (FMES) was established. (JSQC, JIMA, and ORSJ) • The Act on Science Council of Japan was revised. (Cabinet decision). “Management engineering” was added to “Part 5: Engineering.” • ICQCC '84-Manila was held. • The 38th QCS: Sales department and TQC. • The 39th QCS: Current situations and issues of TQC.
<p>1985 June 15</p> <p>(Age 70)</p>	<ul style="list-style-type: none"> • He achieved a hole-in-one (at Tomei Gotemba Country Club). • He became the director of the Association for Overseas Technical Scholarship. (–87) • He became the accounting audit for the Private University Council for Information Processing Education. • He became the chair of the ICQCC '85-TOKYO Program Committee. • He became the Vice-chair of Organizing Committee for the 13th ISO General Conference (Tokyo)/Japanese representative. • The English edition of <i>How to Operate QC Circle Activities</i> (JUSE) was published. [Chinese edition and Korean edition ('76), Portuguese edition ('84), and Italian edition ('87)] • He was awarded with the 1st International Award from the Asia Pacific Quality Control Organization. • He became an honorary advisor/member of the Brazilian Quality Control Association. • He became an honorary member of the Columbian Quality Control Association. 	<ul style="list-style-type: none"> • The number of countries where QC circle activities are conducted reached 52. • The Software QC Research Group was established. (Apr., JUSE) • ICQCC '85-TOKYO was held. (May, JUSE) • The symposium “The Third Revolution of Management Technology” was held. (FMES) • The Information Technology Research and Standardization Center (JSA) was established. • The 13th ISO General Conference was held. (Sep., Tokyo) • Isamu Yamashita (the Vice-president of the Japan Business Federation) was elected as the 14th President of ISO. ('86–'88) • ISO/TC 69 and ISO/TC 176 meetings were held in Tokyo. • The 35th anniversary of the establishment of the Deming Prize Dr. Deming was invited to Japan. (Nov., JUSE) • The Service Industry QC Conference was held (JUSE) • The 40th QCS: TQC—to decide the future direction. • The 41th QCS: TCC—Measures and perspective.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
<p>1986</p> <p>(Age 71)</p>	<ul style="list-style-type: none"> • He gave a lecture to American House of Representatives' Research Delegation. His lecture inspired them to establish the Malcolm Baldrige National Quality Award. (Jan.) • He became the vice-president of the International Standardization Forum. • He became an advisory member of the Executive Committee of the 46th Conference of the International Statistical Institute. (–87) • He became a program coordinator/lecturer of the “Industrial Standardization and Quality Control Seminar for Senior Executives” for participants from developing countries. • He became the principal instructor of the Industrial Product Quality Control Course / Follow-up Course. (UNIDO/AOTS, Kuala Lumpur) • He became an honorary member of the American Society for Quality Control. 	<ul style="list-style-type: none"> • The 15th Anniversary Party of the Japanese Society for Quality Control was held, and <i>15-nen no ayumi</i> (Our 15-year History) was published. • The symposium “Ways to ppm-order Defective Ratio Control” was held. (June, JSQC) • The “Industrial Standardization and Quality Control Seminar for Senior Executives” for participants from developing countries was held. • The 6th division-wise long-term plan for industrial standardization promotion was made. (–90) (Agency of Industrial Science and Technology) • The 100th anniversary of international standardization. • ICQCC '86-Seoul was held. (Oct., South Korea) • The 42nd QCS: Quality—the current situation and issues. • The 43rd QCS: New technology development/new product planning and quality control.
<p>1987</p> <p>(Age 72)</p>	<ul style="list-style-type: none"> • He became the principal instructor of the “Industrial Product Quality Improvement Training Course” follow-up seminar for participants from developing countries. (Kuala Lumpur, UNIDO/AOTS) • Musashi Institute of Technology and the Oregon Institute of Technology became sister universities. • He became an advisor to the ISO/TC 102 Japan Committee. • He became the chair of the ICQC '87-TOKYO Program Committee. (JUSE) • He became an Academician Emeritus of IAQ. • He received an award for the continuous 	<ul style="list-style-type: none"> • QC Circle 25th Anniversary Party was held. (Apr., QC Circle Headquarters) <li style="padding-left: 20px;"><i>The 25-year History of QC Circles</i> was published. A national survey on the spread of QC circle activities was conducted. • The number of countries where QC circle activities are conducted reached 60. • ISO Standards (9000–9004: quality assurance) were established. • “10 Distinctive Features of Japanese Company-wide Quality Control” were selected. (The 44th QCS, JUSE) • The Malcolm Baldrige National Quality Award was established by the American Government. (Aug.)

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
	<p>contribution to <i>QC Circle-monthly magazine</i> as a committee member for 25 years.</p>	<ul style="list-style-type: none"> • ICQC '87-TOKYO was held. (JUSE) • IAQ meeting was held in Tokyo. • EOQC was renamed as EOQ. • ICQCC '87-Bangkok was held. (Dec., Thailand) • The 44th QCS: The distinctive features and problems of Japanese QC. • The 45th QCS: Environmental change and quality management.
<p>1988</p> <p>Nov. 3</p> <p>(Age 73)</p>	<ul style="list-style-type: none"> • He became the president of the Japan-China Industrial Technology and Culture Center. • In November, he received the Second Class Order of the Sacred Treasure. 	<ul style="list-style-type: none"> • <i>FQC</i> magazine was renamed to monthly <i>QC Circle</i> magazine. (Jan., JUSE) • The 2000th Memorial QC Circle Conference was held. (March, QC Circle Headquarters) • EFQM was founded. (Sep.) • The Software Quality Control Seminar for Managers was held. (Oct., JUSE) • The 1st Malcolm Baldrige National Quality Award was awarded. (Oct., America) • Joban Hawaiian Center was awarded the Deming Application Prize for Division, as the first service company to win the prize. (Nov.) • ICQCC '88-Taipei was held. (Nov., Taipei) • The number of foreign companies to whom the use of JIS mark is permitted exceeded 100. • The 46th QCS: Quality control training—current situation and future direction. • The 47th QCS: New product planning and market research—how to understand the quality required by customers.
<p>1989</p> <p>Jan. 23</p> <p>Jan. 31</p>	<ul style="list-style-type: none"> • A party to celebrate his honor conferred decoration was held at the Hotel Okura. • He published <i>Introduction to Quality Control (3rd Edition)</i>. (JUSE Press) The English edition: <i>Introduction to Quality Control (3rd</i> 	<ul style="list-style-type: none"> • The 1st Software Production Quality Control Study Team (SPCT) was dispatched abroad. (Apr., JUSE) • The pioneers of quality control in Japan passed away. Kaoru Ishikawa and Eizaburo Nishibori passed away in April and Shigeru Mizuno in May.

Year	Prof. Ishikawa's Life	Major Events in the Development of QC
March 16	<i>Edition</i>). (3A Corporation) • He became a fellow of the Operations Research Society of Japan.	• The 40th anniversary of the QC Basic Course. The number of people who have completed the course reached 24,000. (JUSE)
April 16	• Kaoru Ishikawa passed away at the age of 73.	• The 32nd National Meeting of Standardization was held to celebrate the 40th anniversary of the Industrial Standardization Act. (JSA)
April 18	• A wake was held at his home in Tobitakyu, Chofu City.	• Florida Power and Light Company won the Deming Prize, as the first foreign company to win the prize. (Nov.)
April 19	• A private funeral was also held at his home.	• ICQCC '89-New Delhi was held. (Dec., India)
April 24	• A public funeral and memorial service was held at Zojoji Temple in Shiba, Tokyo. (The Funeral was arranged by the Musashi Institute of Technology and the Union of Japanese Scientists and Engineers.)	• The 48th QCS: TQC—toward the 1990s. • The 49th QCS: The effective operation of TQC.

- Nov. 1989 Prof. Ishikawa was commended by the Association for Overseas Technical Scholarship. (AOTS)
- Mar. 1990 The FQC Award was renamed the “QC Circle Kaoru Ishikawa Award.” (JUSE)
- June 1993 The Ishikawa Medal was established. (ASQC)

1. The western calendar was used in the description of “Prof. Ishikawa’s life” and “Major events in the development of the QC.” The year 1966 is depicted as “66” omitting the first two numbers.
2. The final year as a committee member, or director is shown in parentheses at the end of the description. For example, the description of “part-time lecturer at Gunma University (–66)” means that he worked as a lecturer until 1966. If no year is shown, that means he hold the position until his death.
3. The words “Quality Control” is often abbreviated to “QC.”
4. Titles were omitted.
5. In this chronology, the following acronyms are used:
 - 1) AGREE: Advisory Group on Reliability of Electronic Equipment
 - 2) AOTS: Association for Overseas Technical Scholarship
 - 3) APO: Asian Productivity Organization
 - 4) ASA: American Standards Association
 - 5) ASQC: American Society for Quality Control
 - 6) BS: British Standards
 - 7) CCS: Civil Communication Section
 - 8) COSCO: Control System Committee
 - 9) EOQC: European Organization for Quality Control
 - 10) EOQ: European Organization for Quality
 - 11) EFQM: European Foundation for Quality Management
 - 12) FMES: Japan Federation of Managerial Engineering Societies

- 13) GHQ: General Headquarters
- 14) IAQ: International Academy for Quality
- 15) ICQC: International Conference on Quality Control
- 16) ICQCC: International Convention on QC Circles
- 17) IEC: International Electrotechnical Commission
- 18) ISO: International Organization for Standardization
- 19) JICA: Japan International Cooperation Agency
- 20) JIMA: Japan Industrial Management Association
- 21) JIS: Japanese Industrial Standards
- 22) JISC: Japanese Industrial Standards Committee
- 23) JMA: Japan Management Association
- 24) JPC: Japan Productivity Center
- 25) JSA: Japan Standards Association
- 26) JSQC: Japanese Society for Quality Control
- 27) JUSE: Union of Japanese Scientists and Engineers
- 28) ORSJ: The Operations Research Society of Japan
- 29) (JSA) QC-Conference: National Meeting of Quality Control and Standardization
- 30) QCS: (JUSE) QS QC Symposium
- 31) OTCA: Overseas Technical Cooperation Agency
- 32) PASC: Pacific Area Standards Congress
- 33) PETT: Pioneer Enterprise Think Tank
- 34) TC, SC, WG: Technical Committee, Subcommittee, Working Group
- 35) UNIDO: United Nations Industrial Development Organization

Note: This chronology was based mainly on the draft offered by Mr. Kozo Koura. I also referred to the timeline written by Mr. Kaoru Fujita, which was attached to the end of the *Quality Control Handbook (New Edition) [2nd Edition]* (1988, JSA), the *15-nen no ayumi* (Our 15-year History) (1986, JSQC) and *20-nen no ayumi* (Our 20-year History) (1991, JSQC). I would like to thank many people for their kind cooperation, including the JUSE office staff and Mr. Masanobu Kawamura of JSA for confirming various facts depicted in “Major events in the development of QC.”

